CLAIMS

What is claimed is:

1. A method, comprising:

operating in a multiple input, multiple output mode; and

in the event of a predetermined condition, operating in a spatial division, multiple access mode.

2. A method as claimed in claim 1, wherein the predetermined condition includes a latency value exceeding a predetermined value.

3. A method as claimed in claim 1, wherein the predetermined condition includes a throughput value being below a predetermined value.

4. A method as claimed in claim 1, wherein the predetermined condition includes a number of collisions exceeding a predetermined value.

5. A method as claimed in claim 1, wherein the predetermined condition includes a desired higher spectral efficiency.

6. A method as claimed in claim 1, wherein the predetermined condition includes a number of receivers exceeding a predetermined value.

7. A method, comprising:

operating in a spatial division, multiple access mode; and

in the event of a predetermined condition, operating in a multiple input, multiple output mode.

8. A method as claimed in claim 5, wherein the predetermined condition includes a spectral efficiency per user being below a predetermined value.

9. A method as claimed in claim 5, wherein the predetermined condition includes a data rate being below a predetermined value.

10. A method as claimed in claim 5, wherein the predetermined condition includes a desired higher data rate for at least one user.

11. A method as claimed in claim 5, wherein the predetermined condition includes a desired higher quality of service for at least one user.

12. A method, comprising:

estimating a channel matrix for at least one or more receivers;

in the event the channels are well-conditioned, operating in a multiple input, multiple output mode; and

otherwise operating in a spatial division, multiple access mode.

13. A method as claimed in claim 12, further comprising, while operating in a multiple input, multiple output mode, observing a media access layer performance at transmitter, and in the event of poor media access layer performance, switching to a spatial division, multiple access mode.

14. A method as claimed in claim 12, further comprising, while operating in a spatial division, multiple access mode, observing physical layer performance of the at least one or more receivers, and in the event of poor physical layer performance, switching to a multiple input, multiple output mode.

15. An article, comprising:

a storage medium having stored thereon instructions that, when executed by a computing platform, result in adaptive switching between a multiple input, multiple output mode and a spatial division, multiple access mode by:

operating in a multiple input, multiple output mode; and

in the event of a predetermined condition, operating in a spatial division, multiple access mode.

16. An article as claimed in claim 15, wherein the predetermined condition includes a latency value exceeding a predetermined value.

17. An article as claimed in claim 15, wherein the predetermined condition includes a throughput value being below a predetermined value.

18. An article as claimed in claim 15, wherein the predetermined condition includes a number of collisions exceeding a predetermined value.

19. An article as claimed in claim 15, wherein the predetermined condition includes a desired higher spectral efficiency.

20. An article as claimed in claim 15, wherein the predetermined condition includes a number of receivers exceeding a predetermined value.

21. An article, comprising:

a storage medium having stored thereon instructions that, when executed by a computing platform, result in adaptive switching between a multiple input, multiple output mode and a spatial division, multiple access mode by:

operating in a spatial division, multiple access mode; and

in the event of a predetermined condition, operating in a multiple input, multiple output mode.

22. An article as claimed in claim 21, wherein the predetermined condition includes a spectral efficiency per user being below a predetermined value.

23. An article as claimed in claim 21, wherein the predetermined condition includes a data rate being below a predetermined value.

24. An article as claimed in claim 21, wherein the predetermined condition includes a desired higher data rate for at least one user.

25. An article as claimed in claim 21, wherein the predetermined condition includes a desired higher quality of service for at least one user.

26. An article, comprising:

a storage medium having stored thereon instructions that, when executed by a computing platform, result in adaptive switching between a multiple input, multiple output mode and a spatial division, multiple access mode by:

estimating a channel matrix for at least one or more receivers;

in the event the channels are well-conditioned, operating in a multiple input, multiple output mode; and

otherwise operating in a spatial division, multiple access mode.

27. An article as claimed in claim 26, wherein the instructions, when executed, further result in adaptive switching between a multiple input, multiple output mode and a spatial division, multiple access mode by, while operating in a multiple input, multiple output mode, observing a media access layer performance at transmitter, and in the event of poor media access layer performance, switching to a spatial division, multiple access mode.

28. . A method as claimed in claim 27, wherein the instructions, when executed, further result in adaptive switching between a multiple input, multiple output mode and a spatial division, multiple access mode by, while operating in a spatial division, multiple access mode, observing physical layer performance of the at least one or more receivers, and in the event of poor physical layer performance, switching to a multiple input, multiple output mode.

29. An apparatus, comprising:

a transceiver;

at least two or more omnidirectional antennas to couple to said transceiver; and

a baseband processor to couple to said transceiver, wherein said baseband processor and said transceiver switch from a multiple input, multiple output mode to a spatial division, multiple access mode under a first condition, and switch from a spatial division, multiple access mode to a multiple input, multiple output mode under a second condition.

30. An apparatus as claimed in claim 29, wherein the first condition includes at least one of a higher latency, a lower throughput, a higher number of retransmits, and a higher number of receivers.

31. An apparatus as claimed in claim 29, wherein the second condition includes at least one of a lower signal-to-noise ratio, a higher bit error rate, a lower spectral efficiency, a desired higher data rate for at least one receiver, a desired higher quality of service for at least one receiver, and a lower number of receivers.